

| Project Title | Funding | Strategic Plan Objective | Institution |
|---|-----------|--------------------------|---|
| Wnt modulation as a treatment for autism spectrum disorders | \$184,568 | Q2.Other | University of Iowa |
| Why are autistic females rare and severe? An approach to autism gene identification. | \$28,600 | Q2.S.B | Johns Hopkins University |
| Using fruit flies to map the network of autism-associated genes | \$124,996 | Q2.Other | University of California, San Diego |
| Using Drosophila to characterize the molecular pathogenesis of autism | \$234,000 | Q2.Other | Massachusetts Institute of Technology |
| Urokinase-type plasminogen activator plasma concentration and its relationship to hepatocyte growth factor (HGF) and GABA levels in autistic children | \$0 | Q2.Other | Hartwick College |
| Understanding the basic neurobiology of Pitt-Hopkins syndrome | \$0 | Q2.S.D | The University of Alabama at Birmingham |
| TrkB agonist therapy for sensorimotor dysfunction in Rett syndrome | \$141,976 | Q2.S.D | Case Western Reserve University |
| Translational regulation of adult neural stem cells | \$359,977 | Q2.S.D | University of Wisconsin - Madison |
| Translational dysregulation in autism pathogenesis and therapy | \$125,000 | Q2.S.D | Massachusetts General Hospital |
| Translation, synchrony, and cognition | \$375,588 | Q2.S.D | New York University |
| Transcriptional responsiveness in lymphoblastoid cell lines | \$0 | Q2.Other | University of Pennsylvania |
| Transcriptional control of inhibitory synapse formation | \$353,295 | Q2.Other | Dana-Farber Cancer Institute |
| To Determine Epidermal growth factor (EGF) and EGF Receptor Plasma Concentration and It's Relationship to Hepatocyte Growth Factor (HGF), GABA Levels and Symptom Severity in Autistic Children | \$4,500 | Q2.S.A | Hartwick College |
| TMLHE deficiency and a carnitine hypothesis for autism | \$60,000 | Q2.S.D | Baylor College of Medicine |
| The striatal circuitry underlying autistic-like behaviors | \$31,975 | Q2.Other | Duke University |
| The role of UBE3A in autism | \$250,001 | Q2.S.D | Harvard Medical School |
| The role of the new mTOR complex, mTORC2, in autism spectrum disorders | \$0 | Q2.Other | Baylor College of Medicine |
| The role of the GRIP protein complex in AMPA receptor trafficking and autism spectrum disorders | \$15,000 | Q2.Other | Johns Hopkins University |
| The role of MeCP2 in Rett syndrome | \$344,213 | Q2.S.D | University of California, Davis |
| The role of genetics in communication deficits in autism spectrum disorders | \$0 | Q2.S.D | University of Pennsylvania |
| The role of Fox-1 in neurodevelopment and autistic spectrum disorder | \$145,757 | Q2.S.D | University of California, Los Angeles |
| The PI3K Catalytic Subunit p110delta as Biomarker and Therapeutic Target in Autism and Schizophrenia | \$0 | Q2.Other | Cincinnati Children's Hospital Medical Center University of Cincinnati |
| The microRNA pathway in translational regulation of neuronal development | \$340,304 | Q2.S.D | University of Massachusetts Medical School |
| The impact of Pten signaling on neuronal form and function | \$375,706 | Q2.Other | Dartmouth College |

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| Synaptic phenotype, development, and plasticity in the fragile X mouse | \$379,329 | Q2.S.D | University of Illinois at Urbana Champaign |
| Studying Rett and Fragile X syndrome in human ES cells using TALEN technology | \$30,000 | Q2.S.D | Whitehead Institute for Biomedical Research |
| Social brain circuits and fever-evoked response in 16p11.2 mice | \$87,500 | Q2.Other | Cold Spring Harbor Laboratory |
| Shank3 in synaptic function and autism | \$385,200 | Q2.Other | Massachusetts Institute of Technology |
| Sex-Specific Gene-Environment Interactions Underlying ASD | \$35,000 | Q2.S.B | Rockefeller University |
| Semaphorin4D and PlexinB1 mediate GABAergic synapse development in mammalian CNS | \$27,814 | Q2.Other | Brandeis University |
| Roles of miRNAs in regulation of Foxp2 and in autism | \$15,000 | Q2.Other | Louisiana State University |
| Role of Sema7A in functional organization of neocortex | \$366,120 | Q2.S.D | Mount Sinai School of Medicine |
| Role of neuronal migration genes in synaptogenesis and plasticity | \$53,942 | Q2.Other | Weill Cornell Medical College |
| Role of neuroligin in the amygdala and associated fear memory | \$0 | Q2.Other | Columbia University |
| Role of neuroligin in synapse formation and maintenance | \$53,942 | Q2.Other | Stanford University |
| Role of negative regulators of FGF signaling in frontal cortex development and autism | \$15,000 | Q2.Other | University of California, San Francisco |
| Role of MEF2 and neural activity in cortical synaptic weakening and elimination | \$415,385 | Q2.S.D | University of Texas Southwestern Medical Center |
| Role of major vault protein in autism | \$0 | Q2.Other | Yale University |
| Role of LIN28/let-7 axis in autism | \$62,500 | Q2.Other | Johns Hopkins University School of Medicine |
| Role of GABA interneurons in a genetic model of autism | \$62,500 | Q2.S.D | Yale University |
| Role of endosomal NHE6 in brain connectivity and autism | \$62,500 | Q2.Other | Brown University |
| Role of CNTNAP2 in neuronal structural development and synaptic transmission | \$55,200 | Q2.Other | Stanford University |
| RNA expression at human fragile X synapses | \$59,217 | Q2.S.D | University of North Carolina at Chapel Hill and North Carolina State University |
| RNA dysregulation in autism | \$250,000 | Q2.Other | The Rockefeller University |
| Revealing protein synthesis defects in fragile X syndrome with new chemical tools | \$337,091 | Q2.S.D | Stanford University |
| Retrograde synaptic signaling by Neuroligin and Neuroligin in C. elegans | \$125,000 | Q2.Other | Massachusetts General Hospital |
| Restoring cortical plasticity in a Rett mouse model | \$60,000 | Q2.S.D | Stanford University |
| Regulation of spine morphogenesis by NrCAM | \$213,120 | Q2.Other | University of North Carolina at Chapel Hill |
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| Regulation of cortical critical periods in a mouse model of autism | \$0 | Q2.S.D | Northwestern University |
| Protein interaction networks in autism | \$62,500 | Q2.Other | Harvard Medical School |
| Project 4: Calcium signaling defects in autism (Pessah/Lein) | \$109,730 | Q2.Other | University of California, Davis |
| Probing the Molecular Mechanisms Underlying Autism: Examination of Dysregulated Protein Synthesis | \$49,300 | Q2.S.D | National Institute of Mental Health (NIH) |
| Probing synaptic receptor composition in mouse models of autism | \$249,995 | Q2.S.D | Boston Children's Hospital |
| Presynaptic Fragile X Proteins | \$249,000 | Q2.S.D | Drexel University |
| Pleiotropic roles of dyslexia genes in neurodevelopmental language impairments | \$36,724 | Q2.S.D | Yale University |
| Physiological studies in a human stem cell model of 15q duplication syndrome | \$60,000 | Q2.S.D | University of Connecticut |
| Phenotypic characterization of MECP2 mice | \$64,742 | Q2.S.D | Children's Hospital of Philadelphia |
| Phagocytosis is misregulated in a Drosophila model of Fragile X syndrome | \$47,232 | Q2.S.D | Columbia University |
| Perturbation of Excitatory Synapse Formation in Autism Spectrum Disorders | \$0 | Q2.Other | Max Planck Florida Institute for Neuroscience |
| Pathogenic roles of paternal-age-associated mutations in autism | \$62,500 | Q2.Other | Weill Cornell Medical College |
| Optogenetic treatment of social behavior in autism | \$385,000 | Q2.Other | University of California, Los Angeles |
| Olfactory abnormalities in the modeling of Rett syndrome | \$339,270 | Q2.S.D | Johns Hopkins University |
| Novel candidate mechanisms of fragile X syndrome | \$249,000 | Q2.S.D | University of Michigan |
| NINDS comment: Disruption of Reelin biosynthesis by de novo missense mutations found in aut | \$32,615 | Q2.Other | State University of New York Upstate Medical Center |
| New approaches to local translation: SpaceSTAMP of proteins synthesized in axons | \$401,927 | Q2.S.D | Dana-Farber Cancer Institute |
| Neuropeptide regulation of juvenile social behaviors | \$14,775 | Q2.Other | Boston College |
| Neurexin, oxidative stress and autism | \$150,000 | Q2.Other | Oklahoma Medical Research Foundation |
| Neurobiology of RAI1, the causal gene for Smith-Magenis syndrome | \$62,314 | Q2.S.D | Stanford University |
| Neurobiology of aggression co-morbidity in mouse model of idic15 autism | \$261,000 | Q2.S.E | Beth Israel Deaconess Medical Center |
| Neurobiological mechanism of 15q11-13 duplication autism spectrum disorder | \$367,304 | Q2.S.D | Beth Israel Deaconess Medical Center |
| Neurexin-neurexin trans-synaptic interaction in learning and memory | \$100,000 | Q2.Other | Columbia University |
| Multigenic basis for autism linked to 22q13 chromosomal region | \$250,000 | Q2.S.D | Hunter College of the City University of New York (CUNY) jointly with Research Foundation of CUNY |

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| mTOR modulation of myelination | \$178,659 | Q2.S.D | Vanderbilt University Medical Center |
| MRI biomarkers of patients with tuberous sclerosis complex and autism | \$720,276 | Q2.S.D | Boston Children's Hospital |
| Mouse Model of Dup15q Syndrome | \$84,253 | Q2.S.D | Texas AgriLife Research |
| Motor cortex plasticity in MeCP2 duplication syndrome | \$125,000 | Q2.S.D | Baylor College of Medicine |
| Morphogenesis and function of the cerebral cortex | \$393,228 | Q2.Other | Yale University |
| Monoallelic expression in neurons derived from induced pluripotent stem cells | \$404,100 | Q2.Other | Albert Einstein College of Medicine of Yeshiva University |
| Molecular signatures of autism genes and the 16p11.2 deletion | \$62,500 | Q2.Other | Massachusetts General Hospital |
| Molecular mechanisms of the synaptic organizer alpha-neurexin | \$373,200 | Q2.Other | University of Michigan |
| Molecular mechanisms of electrical synapse formation in vivo | \$90,000 | Q2.Other | Fred Hutchinson Cancer Research Center |
| Molecular dissection of calmodulin domain functions | \$310,222 | Q2.Other | University of Iowa |
| Modulation of RhoA signaling by the mRNA binding protein hnRNPQ1 | \$30,912 | Q2.S.D | Emory University |
| Modeling Pitt-Hopkins Syndrome, an Autism Spectrum Disorder, in Transgenic Mice Harboring a Pathogenic Dominant Negative Mutation in TCF4 | \$0 | Q2.S.D | University of North Carolina, Chapel Hill |
| Modeling multiple heterozygous genetic lesions in autism using Drosophila melanogaster | \$201,838 | Q2.Other | University of California, Los Angeles |
| Modeling 5-HT-absorbing neurons in neuropathology of autism | \$200,400 | Q2.Other | Albert Einstein College of Medicine of Yeshiva University |
| MicroRNAs in synaptic plasticity and behaviors relevant to autism | \$131,220 | Q2.S.D | Massachusetts General Hospital |
| Met signaling in neural development and circuitry formation | \$230,032 | Q2.Other | University of Arizona |
| Mesocorticolimbic dopamine circuitry in mouse models of autism | \$349,295 | Q2.S.D | Stanford University |
| MeCP2 modulation of BDNF signaling: Shared mechanisms of Rett and autism | \$303,067 | Q2.S.D | University of Alabama at Birmingham |
| Mechanisms Underlying the Cerebellar Contribution to Autism in Mouse Models of Tu | \$190,458 | Q2.S.D | Boston Children's Hospital |
| Mechanisms of synapse elimination by autism-linked genes | \$240,115 | Q2.S.D | University of Texas Southwestern Medical Center |
| Mechanisms of mGluR5 function and dysfunction in mouse autism models | \$393,841 | Q2.S.D | University of Texas Southwestern Medical Center |
| Mechanism of UBE3A imprint in neurodevelopment | \$7,869 | Q2.S.D | University of California, Davis |
| Matrix metalloproteinases expression in autism spectrum disorders | \$15,000 | Q2.Other | University of Naples |

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| Macrocephalic autism: Exploring and exploiting the role of PTEN | \$0 | Q2.Other | University of Wisconsin - Madison |
| Kinetics of drug macromolecule complex formation | \$687,969 | Q2.Other | University of California, San Diego |
| Investigation of sex differences associated with autism candidate gene, Cyfip1 | \$32,413 | Q2.S.B | University of California, Los Angeles |
| Investigation of protocadherin-10 in MEF2- and FMRP-mediated synapse elimination | \$55,670 | Q2.S.D | University of Texas Southwestern Medical Center |
| Investigation of a possible role of the protocadherin gene cluster in autism | \$150,000 | Q2.Other | Columbia University |
| Investigating the Role of RBFOX1 in Autism Etiology | \$0 | Q2.Other | University of Miami |
| Investigating the role of neurexin-1 mutation in autism using human induced neuro | \$49,214 | Q2.Other | Stanford University |
| Interneuron subtype-specific malfunction in autism spectrum disorders | \$120,000 | Q2.Other | New York University School of Medicine |
| Inhibitory mechanisms for sensory map plasticity in cerebral cortex | \$316,453 | Q2.Other | University of California, Berkeley |
| Impact of SynGAP1 mutations on synapse maturation and cognitive development | \$661,570 | Q2.Other | The Scripps Research Institute - Florida |
| Impact of NR2B mutations on NMDA receptors and synapse formation | \$60,000 | Q2.Other | Case Western Reserve University |
| Imaging signal transduction in single dendritic spines | \$449,208 | Q2.Other | Max Planck Florida Corporation |
| Identification of candidate genes at the synapse in autism spectrum disorders | \$168,245 | Q2.S.G | Yale University |
| High throughput screen for small molecule probes for neural network development | \$388,800 | Q2.Other | Johns Hopkins University |
| High metabolic demand of fast-spiking cortical interneurons underlying the etiology of autism | \$56,000 | Q2.Other | Weill Cornell Medical College |
| Genetic studies of autism-related Drosophila neurexin and neuroligin | \$175,802 | Q2.Other | University of Texas Health Science Center, San Antonio |
| Genetic model to study the ASD-associated gene A2BP1 and its target PAC1 | \$125,000 | Q2.Other | Weizmann Institute of Science |
| Genetic and developmental analyses of fragile X mental retardation protein | \$378,771 | Q2.S.D | Vanderbilt University Medical Center |
| Genetically defined stem cell models of Rett and fragile X syndrome | \$350,000 | Q2.S.D | Whitehead Institute for Biomedical Research |
| Function of neurexins | \$461,977 | Q2.Other | Stanford University |
| Function and structure adaptations in forebrain development | \$520,098 | Q2.Other | University of Southern California |
| Function and dysfunction of neuroligins in synaptic circuits | \$450,000 | Q2.Other | Stanford University |
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| Functional and anatomical recovery of synaptic deficits in a mouse model of Angelman Syndrome | \$58,000 | Q2.S.D | University of North Carolina at Chapel Hill |
| Functional analysis of EPHB2 mutations in autism - Project 1 | \$89,633 | Q2.Other | Yale University |
| Functional analysis of EPHB2 mutations in autism | \$124,950 | Q2.Other | McLean Hospital |
| Functional analysis of EFR3A mutations associated with autism | \$62,500 | Q2.Other | Yale University |
| Frontostriatal synaptic dysfunction in a model of autism | \$52,190 | Q2.Other | Stanford University |
| Fragile X syndrome target analysis and its contribution to autism | \$259,025 | Q2.S.D | Vanderbilt University |
| Foxp2 regulation of sex specific transcriptional pathways and brain development | \$88,128 | Q2.S.B | University of Maryland, Baltimore |
| ERK signaling in autism associated with copy number variation of 16p11.2 | \$0 | Q2.Other | Case Western Reserve University |
| Engrailed targets and the control of synaptic circuits in Drosophila | \$361,875 | Q2.Other | University of Puerto Rico Medical Sciences Campus |
| Engrailed genes and cerebellum morphology, spatial gene expression and circuitry | \$451,202 | Q2.Other | Sloan-Kettering Institute for Cancer Research |
| Elucidation and rescue of amygdala abnormalities in the Fmr1 mutant mouse model of fragile X syndrome | \$0 | Q2.S.D | George Washington University |
| Elucidating the function of class 4 semaphorins in GABAergic synapse formation | \$325,130 | Q2.Other | Brandeis University |
| Effect of paternal age on mutational burden and behavior in mice | \$177,600 | Q2.Other | University of North Carolina at Chapel Hill |
| Dysregulation of protein synthesis in fragile X syndrome | \$1,089,880 | Q2.S.D | National Institutes of Health |
| Dysregulation of mTOR signaling in fragile X syndrome | \$467,760 | Q2.S.D | Albert Einstein College of Medicine of Yeshiva University |
| Dysregulated Translation and Synaptic Dysfunction in Medium Spiny Neurons of Autism Model Mice | \$0 | Q2.Other | New York University |
| Dynamic regulation of Shank3 and ASD | \$604,587 | Q2.Other | Johns Hopkins University |
| Dual modulators of GABA-A and Alpha7 nicotinic receptors for treating autism | \$0 | Q2.Other | University of California, Irvine |
| Dissecting Reciprocal CNVs Associated With Autism | \$0 | Q2.Other | Duke University |
| Dissecting neural mechanisms integrating multiple inputs in C. elegans | \$477,449 | Q2.Other | Salk Institute for Biological Studies |
| DISRUPTION OF TROPHIC INHIBITORY SIGNALING IN AUTISM SPECTRUM DISORDERS | \$180,832 | Q2.Other | Northwestern University |
| Deciphering the function and regulation of AUTS2 | \$0 | Q2.Other | University of California, San Francisco |
| Cytoplasmic functions of Rbfox1, a candidate autism gene | \$231,000 | Q2.Other | University of California, Los Angeles |
| Cortactin and spine dysfunction in fragile X | \$32,875 | Q2.S.D | University of California, Irvine |

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| Connections between autism, serotonin and hedgehog signaling | \$124,401 | Q2.S.D | Medical Research Council-National Institute for Medical Research |
| CNTNAP2 regulates production, migration and organization of cortical neurons | \$62,496 | Q2.Other | Memorial Sloan-Kettering Cancer Center |
| Characterizing the regulatory pathways and regulation of AUTS2 | \$0 | Q2.Other | University of California, San Francisco |
| Cerebellar plasticity and learning in a mouse model of autism | \$62,500 | Q2.Other | University of Chicago |
| Cell adhesion molecules in CNS development | \$515,850 | Q2.Other | The Scripps Research Institute - California |
| Caspr2 as an autism candidate gene: A proteomic approach to function & structure | \$305,280 | Q2.Other | University of Medicine & Dentistry of New Jersey - Robert Wood Johnson Medical School |
| Biology of non-coding RNAs associated with psychiatric disorders | \$430,144 | Q2.Other | University of Southern California |
| Bi-directional regulation of Ube3a stability by cyclic AMP-dependent kinase | \$60,000 | Q2.S.D | University of North Carolina at Chapel Hill |
| Beta-catenin signaling in autism spectrum disorders | \$60,100 | Q2.S.G | University of Illinois at Chicago |
| BDNF and the restoration of synaptic plasticity in fragile X and autism | \$449,134 | Q2.S.D | University of California, Irvine |
| Autism phenotypes in Tuberous Sclerosis: Risk factors, features & architecture | \$149,999 | Q2.S.D | King's College London |
| Autism Linked LRRTM4-Heparan Sulphate Proteoglycan Complex Functions in Synapse Development | \$0 | Q2.S.G | University of British Columbia |
| Autism and the insula: Genomic and neural circuits | \$0 | Q2.Other | California Institute of Technology |
| Astrocyte function in genetic mouse models of autism spectrum disorders | \$394,063 | Q2.S.D | Cleveland Clinic Lerner College of Medicine, Case Western Reserve University |
| A stem cell based platform for identification of common defects in autism spectrum disorders | \$0 | Q2.S.D | The Scripps Research Institute - California |
| A Role for Cytoplasmic Rbfox1/A2BP1 in Autism | \$0 | Q2.Other | University of California, Los Angeles |
| A novel transplantation assay to study human PTEN ASD alleles in GABAergic interneurons | \$60,000 | Q2.Other | University of California, San Francisco |
| A Novel Glial Specific Isoform of Cdkl5: Implications for the Pathology of Autism in Rett Syndrome | \$0 | Q2.S.D | University of Nebraska Medical Center |
| A novel essential gene for human cognitive function | \$47,232 | Q2.S.D | Harvard Medical School |
| Analysis of Shank3 complete and temporal and spatial specific knockout mice | \$408,192 | Q2.Other | Duke University |
| Analysis of MEF2 in cortical connectivity and autism-associated behaviors | \$49,214 | Q2.S.D | Harvard Medical School |
| Analysis of autism linked genes in C. elegans | \$62,500 | Q2.Other | Massachusetts General Hospital |
| Allelic choice in Rett syndrome | \$374,862 | Q2.S.D | Winifred Masterson Burke Medical Research Institute |
| A functional genomic analysis of the cerebral cortex | \$486,802 | Q2.Other | University of California, Los Angeles |

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| A family-genetic study of autism and fragile X syndrome | \$593,966 | Q2.S.D | Northwestern University |
| A cerebellar mutant for investigating mechanisms of autism in Tuberous Sclerosis | \$149,967 | Q2.S.D | Boston Children's Hospital |
| Aberrant synaptic form and function due to TSC-mTOR-related mutation in autism spectrum disorders | \$150,000 | Q2.S.D | Columbia University |
| a-Actinin Regulates Postsynaptic AMPAR Targeting by Anchoring PSD-95 | \$0 | Q2.Other | University of California, Davis Medical Center University of California, Davis |
| a-Actinin Regulates Postsynaptic AMPAR Targeting by Anchoring PSD-95 | \$0 | Q2.Other | University of California, Davis |

